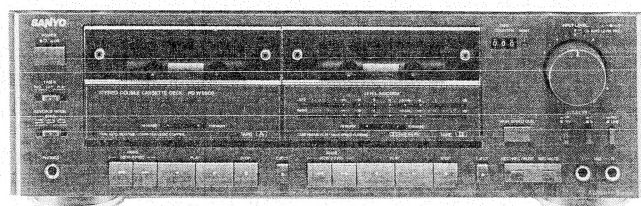




## Service Manual

## Stereo Cassette Deck

**RD W8500** (EUROPE)  
(SPAIN)  
(W. GERMANY)



### Specifications

#### Note:

The below mentioned specifications are mainly based on the IHF measurements standard. They can therefore not directly be compared with specifications based on the DIN standard or other standards.

#### PRODUCT CODE No.

142 844 00 (EUROPE)

142 844 01 (SPAIN)

142 844 02 (W. GERMANY)

Tape . . . . .	Metal, CrO <sub>2</sub> , normal tape	Signal to noise ratio (metal tape) . . . .	76 dB (Dolby C NR on) 61 dB (Dolby NR off)
Recording system . . . . .	AC bias, 4-track stereo	Inputs . . . . .	MIC: 0.5 mV/400 ohms to 10 kohms LINE IN: 100 mV/50 kohms
Erasing system . . . .	AC erasing, 2-track	Outputs . . . . .	LINE OUT: 0.4 V/2 kohms PHONES: 8 ohms
Rewind and fast forward time. . . .	Approx. 120 sec. (C-60)	Power require-ments . . . . .	AC 220 V, 50 Hz
Wow and flutter . . .	0.08% (WRMS) 0.18% (DIN)	Dimensions (W x D x H) . . . .	Approx. 420 x 360 x 135 mm
Frequency response. . . . .	40 — 16,000 Hz (metal) 40 — 15,000 Hz (CrO <sub>2</sub> ) 40 — 13,000 Hz (normal)		

Specifications and design subject to change without notice.

#### Note:

The power switch is mounted on the secondary side. The unit is not disconnected from AC-power, even when switched off.

Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.

"Dolby" and the double-Dsymbol are trademarks of Dolby Laboratories Licensing Corporation.

REFERENCE No. WM-580224

## ADJUSTMENT OF DECK & TORQUE

### Amplifier Adjustment

	Item	Deck	Test Tape	Input	NORMAL	Output	Adjust	Remarks
1	Bias Frequency		AC-712	(beat cancelli SW: 1 side)			L601	Connect the counter probe $\oplus$ to the white lead from E Head, then adjust to obtain 105kHz on the counter.
2	Head Azimuth	TAPE A TAPE B	VTT-738	—	NORMAL	LINE OUT	—	Adjustment to obtain maximum, right and left balanced output.
3	Playback Level	TAPE A	TCC-130 200nW/m	—	NORMAL	LINE OUT	SVR701 SVR801	Adjust to obtain 0.55V on VTVM.
		TAPE B					SVR702 SVR802	
4	Rec/Play Level	TAPE B	AC-224	LINE IN 1kHz -17dB	NORMAL	LINE OUT	SVR703 SVR803	Adjust record monitor to obtain same (0.39V) output of rec/play.
5	Rec/Play Frequency	TAPE B	AC-224	LINE IN 1kHz/10kHz -37dB	NORMAL	LINE OUT	SVR704 SVR804	Adjust to obtain same output of 1kHz and 10kHz.
6	Rec./Play Frequency (check)	TAPE B	AC-224 AC-513 AC-712	LINE IN 1kHz/10kHz -37dB	NORMAL Cr O <sub>2</sub> METAL	LINE OUT	SVR704 SVR804 SVR601 SVR602	Check to obtain same output of 1kHz, 10kHz.

Note: Input: LINE IN terminal

### Tape Speed Adjustments

1	High	TYPE A	TCW-211	SVR606	3010 $\pm$ 5Hz	Memorize the tape speed on counter.
2	High	TAPE B		SVR603	2990 $\pm$ 5Hz	Adjust the speed of TAPE B 25 ~ 35 slower than TAPE A speed.
3	Normal	TAPE A	MTT-111N	SVR605	3010 $\pm$ 5Hz	Memorize the tape speed on counter.
4	Normal	TAPE B		SVR604	2990 $\pm$ 5Hz	Adjust the speed of TAPE B 25 ~ 35 slower than TAPE A speed.

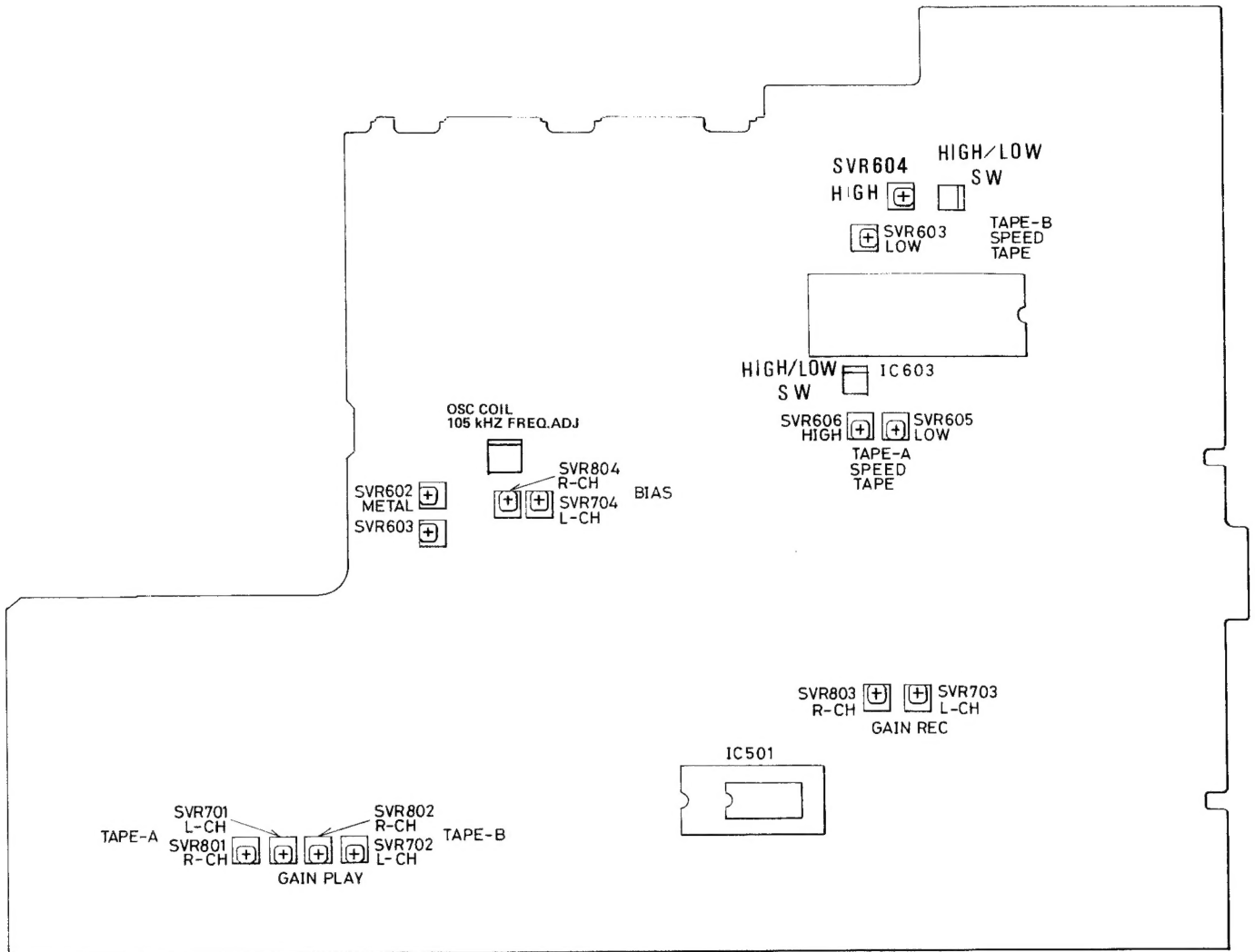
- Notes:
1. For making adjustment of step 1, Set the TAPE B mechanism is record made with C-60 blank cassette tape.
  2. Adjustment should be made at the ending portion of the tape.
  3. Confirm the indication of the tape speed for 2 second after adjustment has been made and adjusting driver has been removed from SVR.
  4. For adjustment, use the screw driver with isolated tip from grip.
  5. For high speed check, electrically short the est points on the main PCB for high speed. (Test Tape is TCW-211) and confirm that the speed of TAPE B is in -40 ~ 70 Hz against TAPE A.

### Torque Measurements

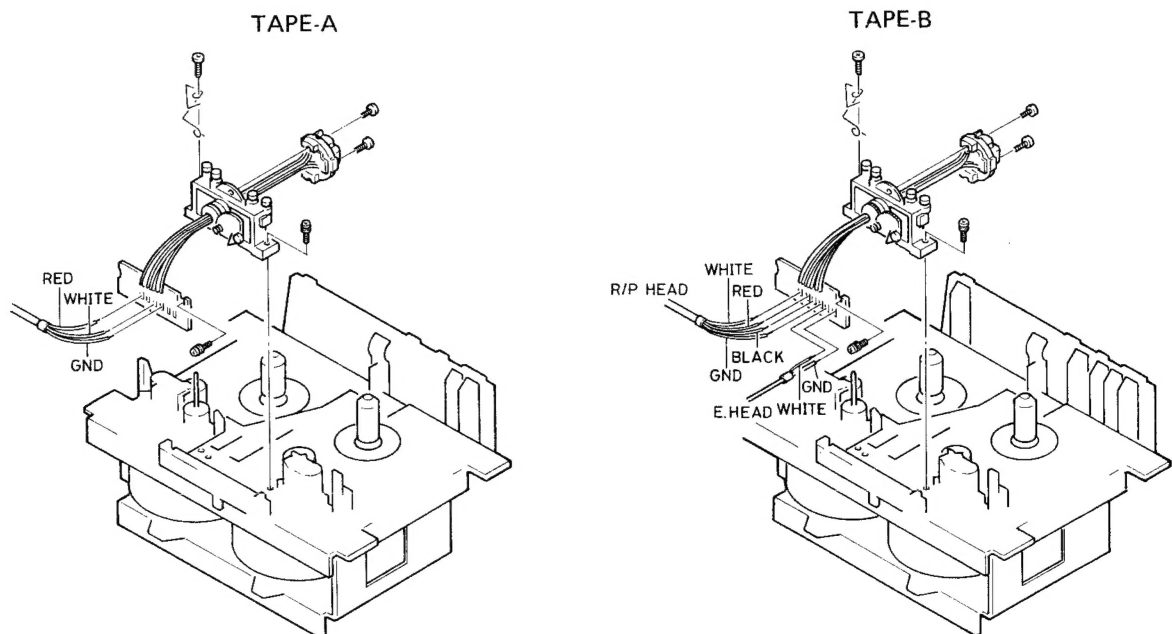
Note: Prior to measurement, clean the head, capstan and pinch roller.

Item	Take-up torque	Back tension	Tape tension
Test cassette	PLAY: TW-2111 F.FWD/REW: TW-2231	PLAY/F.F: TW-2111 REW: Torque Gauge	Driving power cassette: TW-2412
PLAY	30 ~ 60 gr. cm	2 ~ 4.5 gr. cm	> 60g
F. FWD	55 ~ 120 gr. cm	—	
REW	55 ~ 120 gr. cm	—	

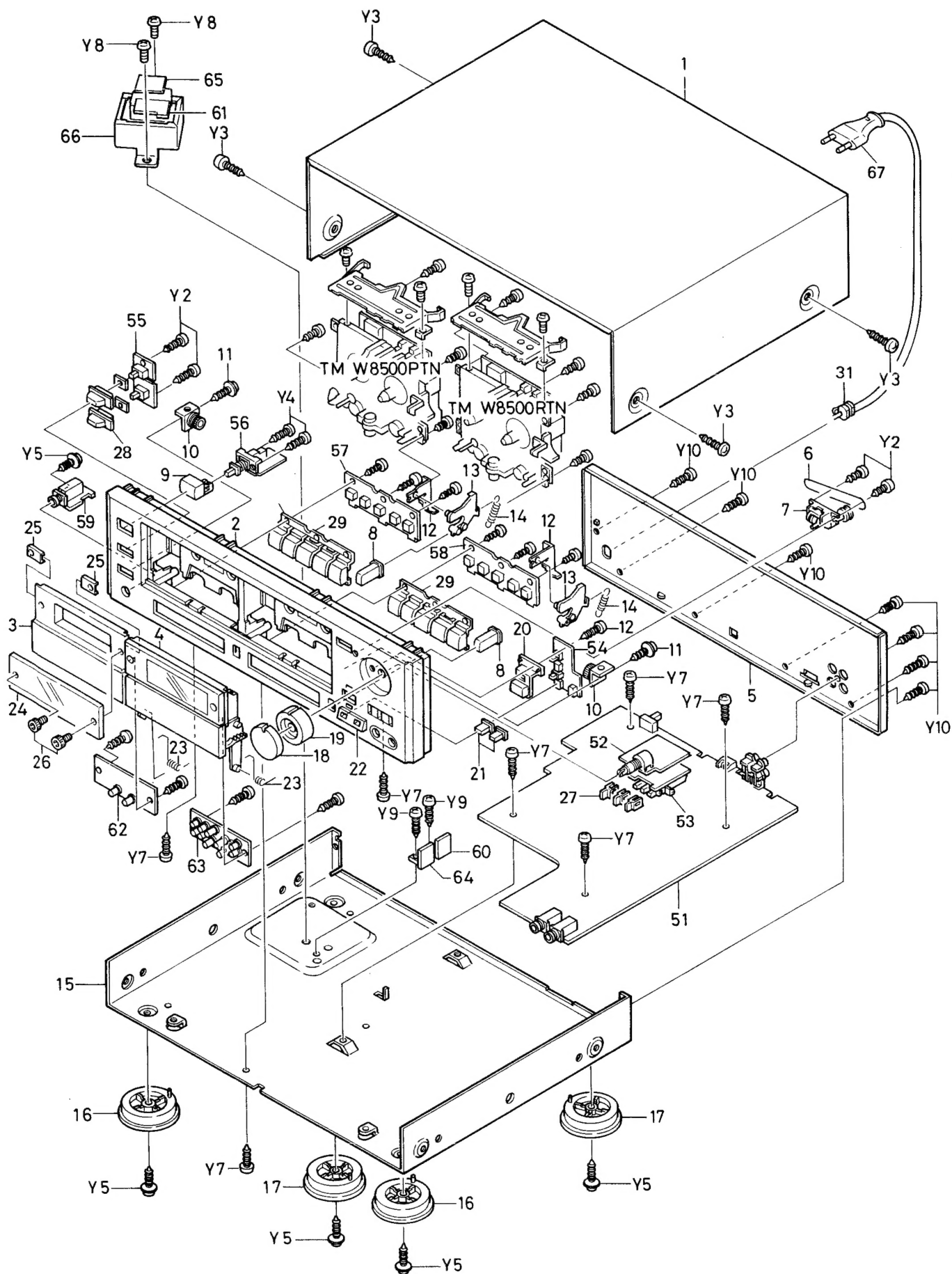
## PARTS LOCATION



## REPLACEMENT OF HEAD



# EXPLODED VIEW (CABINET & CHASSIS)





## PARTS LIST

### PRODUCT SAFETY NOTICE

Each precaution in this manual should be followed during servicing. Components identified with the IEC symbol  $\triangle$  in the parts list and the schematic diagram designate components in which safety can be of special significance. When replacing a component identified with  $\triangle$ , use only the replacement parts designated, or parts with the same ratings of resistance, wattage or voltage that are designated in the parts list in this manual.

Leakage current or resistance measurements must be made to determine that exposed parts are acceptably insulated from the supply circuit before returning the product to the customer.

CAUTION : Regular type resistors and capacitors are not listed. To know those values, refer to the schematic diagram.

### PACKING & ACCESSORIES

Ref. No.	Part No.	Description
or or	614 211 9426	INNER CARTON, (SPAIN)
	614 211 9433	INNER CARTON, (W.GERMANY)
	614 207 9041	INNER CARTON, (EUROPE)
	614 207 9065	PAD
	614 207 9072	PAD
	614 176 9240	INNER POLYE LAMINA COVER, 500X600
	614 211 9495	INSTRUCTION MANUAL, (SPAIN)
	614 211 9501	INSTRUCTION MANUAL, (W.GERMANY)
	614 207 9089	INSTRUCTION MANUAL, (EUROPE)
	614 106 3393	STAND, FELT
	614 176 0452	INNER POLYE COVER, 50X100
	614 176 2685	INNER POLYE COVER, 200X300
	614 022 2777	LEAD CORD, RCA
	614 022 7550	LEAD CORD, 700
	614 022 9509	LEAD CORD

### CABINET & CHASSIS

Ref. No.	Part No.	Description
1	614 207 9218	ASSY, CABINET
2	614 207 8730	ASSY, PANEL, FRONT
3	614 207 8693	ASSY, LID, CASSETTE
4	614 207 8709	ASSY, LID, CASSETTE
5	614 211 9280	PANEL, REAR, (W.GERMANY)
	614 211 9266	PANEL, REAR, (SPAIN)
	614 207 8785	PANEL, REAR, (EUROPE)
6	614 207 9003	BELT, SQUARE
7	614 207 9010	COUNTER
8	614 207 8884	BUTTON, EJECT
9	614 207 3445	BUTTON, POWER
10	614 069 0385	GEAR ASSY, DAMPER
11	412 003 1708	SPECIAL SCREW, GEAR
12	614 207 8921	BRACKET-M, EJECT
13	614 207 9027	LEVER, EJECT
14	614 151 3768	SPRING COIL, EJECT
15	614 207 8747	CABINET, BOTTOM
16	614 210 3968	ASSY, FOOT
17	614 210 3975	ASSY, FOOT
19	614 207 8846	KNOB, ROTARY, INPUT LEVEL L
31	614 129 1901	FIXER, AC CORD
18	614 207 8853	KNOB, ROTARY, INPUT LEVEL R
20	614 207 8891	BUTTON, SPEED
21	614 207 8907	BUTTON, REC PAUSE
22	614 207 8761	ESCUTCHEON, REC PAUSE, REC MUTE
23	614 207 9034	SPRING, WIRE
24	614 207 8839	WINDOW
25	614 207 8938	PLATE, WINDOW
26	411 099 1203	BOLT HEX-SCT 3X8
27	614 207 3452	BUTTON, DOLBY
28	614 207 8860	KNOB, SLIDE
29	614 207 8877	BUTTON, MECH

### FIXING PARTS

Ref. No.	Part No.	Description
Y1	411 021 1905	SCR S-TPG BIN 2.6X10
Y2	411 021 1806	SCR S-TPG BIN 2.6X10
Y3	411 021 6603	SCR S-TPG BIN 3X8
Y4	411 022 2802	SCR S-TPG FLT 3X10
Y5	411 024 6501	SCR S-TPG PAN + FLG 3X8
Y6	411 021 3503	SCR S-TPG BIN 3X10
Y7	411 021 6405	SCR S-TPG BIN 3X8
Y8	411 001 3905	SCR S-TPG BIN 4X6
Y9	411 027 3101	SCR S-TPG BIN 3X8
Y10	412 004 2902	SPECIAL SCREW

### ELECTRICAL PARTS

Ref. No.	Part No.	Description
65	614 209 2927	PCB, P.T PRI
66	$\triangle$ 614 209 3085	POWER TRANS
67	$\triangle$ 614 023 3100	POWER CORD
or	$\triangle$ 614 203 0493	POWER CORD
	614 209 2989	SOCKET, P HEAD
	614 209 2996	SOCKET, R/P HEAD
	614 209 3009	SOCKET, E HEAD

### MAIN P.C.BOARD ASSY\*51 614 214 5265 (W.GERMANY)

Ref. No.	Part No.	Description
51*	614 209 2583	ASSY, PCB, MAIN (EUROPE/SPAIN)
	614 121 6034	HEAT SINK
	614 012 4316	SWITCH, BEAT CANCEL
	614 017 2096	PLUG, 2P E HEAD
	614 017 2102	PLUG, 3P PLAY HEAD
	614 017 2126	PLUG, 5P R/P HEAD
	614 016 4084	PLUG, 2P HI SPEED TP
	614 017 2546	PLUG, 3P TAPE A LED
	614 017 2584	PLUG, 7P TAPE B LED
	614 206 0223	SOCKET, 5P MECH BUTTON
	614 020 8856	SOCKET, 4P MOTOR LEAD
	614 016 8242	PLUG, 5P SYSTEM CONTROL
	614 209 3030	SOCKET, 7P A-MECH
	614 209 3047	SOCKET, 10P B-MECH
	614 020 1239	SOCKET, 4P
	614 020 1246	SOCKET, 5P
	614 020 6586	SOCKET, 6P
	614 035 4928	SOCKET, 3P
	614 035 4935	SOCKET, 4P
	614 035 4966	SOCKET, 7P
	614 035 4980	SOCKET, 9P
	614 035 5017	SOCKET
	614 036 4644	SOCKET, 4P
	614 020 1222	SOCKET, 3P
	614 212 6912	SOCKET, MIC
	614 035 4928	SOCKET, 3P
	614 020 6562	SOCKET, 4P
	614 020 6548	SOCKET, 2P
L501	614 029 3814	MX COIL, 105KHZ
L502	614 029 3975	MX COIL, 105KHZ
L551	614 029 3814	MX COIL, 105KHZ
L552	614 029 3975	MX COIL, 105KHZ

# PARTS LIST

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
L601	614 212 0798	TRANS, OSC	Q704	405 017 9709	TR 2SC3330-U
L701	614 027 8163	CHOKE COIL	Q705	405 020 9604	TR 2SD1011-R
L702	614 029 3166	MX COIL	Q706	405 020 9604	TR 2SD1011-R
L703	614 210 3708	INDUCTOR, FERITE	Q707	405 021 0600	TR 2SD1012-G-SPA
L801	614 027 8163	CHOKE COIL	or	405 033 6805	TR 2SD1468S-S
L802	614 029 3166	MX COIL	Q708	405 021 0600	TR 2SD1012-G-SPA
L803	614 210 3708	INDUCTOR, FERITE, 4.7MH	or	405 033 6805	TR 2SD1468S-S
X601	614 194 2902	CERAMIC RESONATOR, 4.19MHZ	Q709	405 011 8609	TR 2SC1740S-S
SVR601	614 204 1864	SEMI V.R, 1K OHM	or	405 017 9709	TR 2SC3330-U
SVR602	614 204 1918	SEMI V.R, 20K OHM	Q710	405 011 8609	TR 2SC1740S-S
SVR603	614 204 1871	SEMI V.R, 2K OHM	or	405 017 9709	TR 2SC3330-U
SVR604	614 204 1871	SEMI V.R, 2K OHM	Q711	405 011 8609	TR 2SC1740S-S
SVR605	614 204 1871	SEMI V.R, 2K OHM	or	405 017 9709	TR 2SC3330-U
SVR606	614 204 1871	SEMI V.R, 2K OHM	Q712	405 011 8609	TR 2SC1740S-S
SVR701	614 204 1901	SEMI V.R, 10K OHM	or	405 017 9709	TR 2SC3330-U
SVR702	614 204 1901	SEMI V.R, 10K OHM	Q713	405 011 7503	TR 2SC1740S-S
SVR703	614 204 1895	SEMI V.R, 5K OHM	or	405 018 0200	TR 2SC3331-U
SVR704	614 204 1956	SEMI V.R, 100K OHM	Q714	405 010 9706	TR 2SC1571-G-NP
SVR801	614 204 1901	SEMI V.R, 10K OHM	Q801	405 017 9709	TR 2SC3330-U
SVR802	614 204 1901	SEMI V.R, 10K OHM	Q802	405 017 9709	TR 2SC3330-U
SVR803	614 204 1895	SEMI V.R, 5K OHM	Q803	405 017 9709	TR 2SC3330-U
SVR804	614 204 1956	SEMI V.R, 100K OHM	Q804	405 011 8609	TR 2SC1740S-S
RA601	614 209 3627	RESISTOR, 10KX5	or	405 017 9709	TR 2SC3330-U
RA602	614 209 3740	RESISTOR, 10KX11	Q805	405 020 9604	TR 2SD1011-R
RA604	614 209 3603	RESISTOR, 10KX4	Q807	405 011 8609	TR 2SC1740S-S
RA605	614 209 3764	RESISTOR, 10KX12	or	405 033 6805	TR 2SD1468S-S
IC501	409 145 8306	IC CX20188	Q808	405 021 0600	TR 2SD1012-G-SPA
IC601	409 016 5502	IC LA2000	or	405 033 6805	TR 2SD1468S-S
IC602	409 020 9107	IC LC4069UB	Q809	405 011 8609	TR 2SC1740S-S
IC603	410 067 9500	IC LC66508B-4119	or	405 017 9709	TR 2SC3330-U
IC701	409 121 8702	IC LA3246	Q810	405 011 8609	TR 2SC1740S-S
IC903	614 002 3275	IC-PROTECTOR ICP-F15	or	405 017 9709	TR 2SC3330-U
IC904	614 002 3275	IC-PROTECTOR ICP-F15	Q811	405 011 8609	TR 2SC1740S-S
Q501	405 010 9706	TR 2SC1571-G-NP	or	405 017 9709	TR 2SC3330-U
or	405 019 3705	TR 2SC536-G-AUD-SPA	Q812	405 011 8609	TR 2SC1740S-S
Q551	405 010 9706	TR 2SC1571-G-NP	or	405 017 9709	TR 2SC3330-U
or	405 019 3705	TR 2SC536-G-AUD-SPA	Q813	405 011 7503	TR 2SC1740S-S
Q601	405 025 0200	TR 2SD734-G	or	405 018 0200	TR 3331-U
Q602	405 017 9709	TR 2SC3330-U	Q814	405 010 9706	TR 2SC1571-G-NP
Q603	405 017 9709	TR 2SC3330-U	Q901	405 023 5306	TR 2SD400-F-MP
Q604	405 017 9709	TR 2SC3330-U	Q902	405 025 0200	TR 2SD734-G
Q605	405 018 0200	TR 2SC3331-U	D621	407 004 9006	DIODE DSF10B
Q606	405 018 0200	TR 2SC3331-U	D622	407 007 9904	DIODE GMA01
Q607	405 004 4601	TR 2SA608-F-SPA	D623	407 007 9904	DIODE GMA01
Q608	405 017 9709	TR 2SC3330-U	D624	407 007 9904	DIODE GMA01
Q609	405 017 9709	TR 2SC3330-U	D625	407 005 4505	DIODE DS442X
Q610	405 017 9709	TR 2SC3330-U	D626	407 007 9904	DIODE GMA01
Q611	405 017 9709	TR 2SC3330-U	D627	407 007 9904	DIODE GMA01
Q612	405 017 9709	TR 2SC3330-U	D628	407 007 9904	DIODE GMA01
Q613	405 001 7704	TR 2SA1016-F	D629	407 007 9904	DIODE GMA01
Q614	405 011 8609	TR 2SC1740S-S	D630	407 007 9904	DIODE GMA01
or	405 017 9709	TR 2SC3330-U	D631	407 007 9904	DIODE GMA01
Q621	405 000 3806	TR DTC114YS	D632	407 007 9904	DIODE GMA01
Q622	405 000 0508	TR DTA114ES	D633	407 007 9904	DIODE GMA01
Q623	405 000 0508	TR DTA114ES	D635	407 005 4505	DIODE DS442X
Q624	405 007 6701	TR 2SB598-F-NP	D636	407 007 9904	DIODE GMA01
Q625	405 007 6701	TR 2SB598-F-NP	D637	407 005 4505	DIODE DS442X
Q626	405 007 6701	TR 2SB598-F-NP	D638	407 007 9904	DIODE GMA01
Q627	405 004 4601	TR 2SA608-F-SPA	D901	407 004 9006	DIODE DSF10B
Q628	405 000 3806	TR DTC114YS	D902	407 004 9006	DIODE DSF10B
Q629	405 000 3806	TR DTC114YS	D903	407 004 9006	DIODE DSF10B
Q630	405 000 3806	TR DTC114YS	D904	407 004 9006	DIODE DSF10B
Q631	405 007 6701	TR 2SB598-F-NP	D905	407 004 9006	DIODE DSF10B
Q632	405 007 6701	TR 2SB598-F-NP	D906	407 004 9006	DIODE DSF10B
Q633	405 007 6701	TR 2SB598-F-NP	D907	407 004 9006	DIODE DSF10B
Q634	405 004 4601	TR 2SA608-F-SPA	D908	407 053 7206	ZENER DIODE MTZ6.2C
Q635	405 000 3806	TR DTC114YS	D911	407 004 9006	DIODE DSF10B
Q637	405 000 3806	TR DTC114YS	D912	407 004 9006	DIODE DSF10B
Q701	405 011 8609	TR 2SC1740S-S	C609	403 080 6106	POLYPRO 0.01U J 100V
or	405 017 9709	TR 2SC3330-U	R925	402 004 4303	FUSIBLE, 100 OHM, 1/4W, $\pm 5\%$
Q702	405 017 9709	TR 2SC3330-U	R699	402 004 4303	FUSIBLE, 100HM, 1/4W, $\pm 5\%$
Q703	405 017 9709	TR 2SC3330-U			
Q704	405 011 8609	TR 2SC1740S-S			
L602	614 028 4379	1MH			

## PARTS LIST

### VR P.C.BOARD ASSY

Ref. No.	Part No.	Description
52  VR701	614 209 2590	ASSY, PCB, VR
	614 020 1222	SOCKET, 3P
	614 020 6555	SOCKET, 3P
	614 209 3245	VR, ROTARY
	614 052 0002	LUG

### DOL INPUT SW P.C.BOARD ASSY

Ref. No.	Part No.	Description
53	614 209 2606	ASSY, PCB, DOL INPUT SW
	614 035 4928	SOCKET, 3P
	614 020 1246	SOCKET, 5P
	614 209 3283	SWITCH, PUSH
	614 020 6555	SOCKET, 3P

### REC SW P.C.BOARD ASSY

Ref. No.	Part No.	Description
54	614 209 2613	ASSY, PCB, REC SW
	614 035 4966	SOCKET, 7P
	614 020 6548	SOCKET, 2P
	614 018 9056	SWITCH
	614 018 9056	SWITCH
S10	614 018 9056	SWITCH
S11	614 018 9056	SWITCH
S12	614 018 9056	SWITCH
D615	407 027 5207	LED SLP-151B-50
D616	407 027 5207	LED SLP-151B-50
D698	407 007 9904	DIODE GMA01
D699	407 007 9904	DIODE GMA01

### MODE TIMER SW P.C.BOARD ASSY

Ref. No.	Part No.	Description
55	614 209 2620	ASSY, PCB, MODE TIMER SW
	614 209 3269	SWITCH, SLIDE
	614 035 4935	SOCKET, 4P

### POWER SW P.C.BOARD ASSY

Ref. No.	Part No.	Description
56	614 209 2637	ASSY, PCB, POWER SW
	614 020 6562	SOCKET, 4P
	614 019 0656	PUSH SWITCH

### TAPE A MECH P.C.BOARD ASSY

Ref. No.	Part No.	Description
57 S8 S9 S10 S11 S12 D641 or D642 or D643 or D644 or D645 or D646 or	614 209 2644	ASSY, PCB, TAPE A MECH
	614 018 9056	SWITCH
	614 018 9056	SWITCH
	614 018 9056	SWITCH
	614 018 9056	SWITCH
	614 018 9056	SWITCH
	407 007 9904	DIODE GMA01
	407 012 4406	DIODE 1SS133
	407 012 4406	DIODE 1SS133
	407 007 9904	DIODE GMA01
	407 012 4406	DIODE 1SS133
	407 007 9904	DIODE GMA01
	407 012 4406	DIODE 1SS133
	407 007 9904	DIODE GMA01
	407 012 4406	DIODE 1SS133
	407 007 9904	DIODE GMA01

### TAPE B MECH P.C.BOARD ASSY

Ref. No.	Part No.	Description
58 S13 S14 S15 S16 S17 D647 or D648 or D649 or D650 or D651 or D652 or	614 209 2651	ASSY, PCB, TAPE B MECH
	614 018 9056	SWITCH
	614 018 9056	SWITCH
	614 018 9056	SWITCH
	614 018 9056	SWITCH
	614 018 9056	SWITCH
	407 012 4406	DIODE 1SS133
	407 007 9904	DIODE GMA01
	407 012 4406	DIODE 1SS133
	407 007 9904	DIODE GMA01
	407 012 4406	DIODE 1SS133
	407 007 9904	DIODE GMA01
	407 012 4406	DIODE 1SS133
	407 007 9904	DIODE GMA01
	407 007 9904	DIODE GMA01
	407 012 4406	DIODE 1SS133

### HEAD PHONE P.C.BOARD ASSY

Ref. No.	Part No.	Description
59	614 209 2668	ASSY, PCB, HEAD PHONE
	614 212 6905	SOCKET, HEAD PHONE
	614 035 4928	SOCKET, 3P

### DC POWER-1 P.C.BOARD ASSY

Ref. No.	Part No.	Description
60  IC902	614 209 2675	ASSY, PCB, DC POWER-1
	614 020 6555	SOCKET, 3P
	409 001 7603	IC AN7812F

### P.T SEC P.C.BOARD ASSY

Ref. No.	Part No.	Description
61  R901	614 209 2682	ASSY, PCB, P.T SEC
	614 020 6548	SOCKET, 2P
	402 043 8003	RESISTOR 0.56 J- 1/2W

### TAPE A LED P.C.BOARD ASSY

Ref. No.	Part No.	Description
62  D613 D614	614 209 2705	ASSY, PCB, TAPE A LED
	614 209 3016	SOCKET, 3P
	408 005 1808	LED SLZ-738F-03-A-T2
	408 005 1808	LED SLZ-738F-03-A-T2

### TAPE B LED P.C.BOARD ASSY

Ref. No.	Part No.	Description
63  IC702 IC802 D611 D612 D701 D702 D703 D704 D705 D706 D801	614 209 2712	ASSY, PCB, TAPE B LED
	614 209 3023	SOCKET, 7P
	409 003 0008	IC BA6124
	409 003 0008	IC BA6124
	408 005 1808	LED SLZ-738F-03-A-T2
	408 005 1808	LED SLZ-738F-03-A-T2
	408 005 1808	LED SLZ-738F-03-A-T2
	408 005 1808	LED SLZ-738F-03-A-T2
	408 005 1808	LED SLZ-738F-03-A-T2
	408 005 1808	LED SLZ-738F-03-A-T2
	408 005 1501	LED SLZ-138C-03-B-T2
	408 005 1501	LED SLZ-138C-03-B-T2
	408 005 1501	LED SLZ-138C-03-B-T2
	408 005 1808	LED SLZ-738F-03-A-T2
	408 005 1808	LED SLZ-738F-03-A-T2

## PARTS LIST

Ref. No.	Part No.	Description
D802	408 005 1808	LED SLZ-738F-03-A-T2
D803	408 005 1808	LED SLZ-738F-03-A-T2
D804	408 005 1808	LED SLZ-738F-03-A-T2
D805	408 005 1501	LED SLZ-138C-03-B-T2
D806	408 005 1501	LED SLZ-138C-03-B-T2

## DC POWER-2 P.C.BOARD ASSY

Ref. No.	Part No.	Description
64	614 212 8541	ASSY, PCB, DC POWER-2
	614 020 6555	SOCKET, 3P
IC901	409 001 7603	IC AN7812F

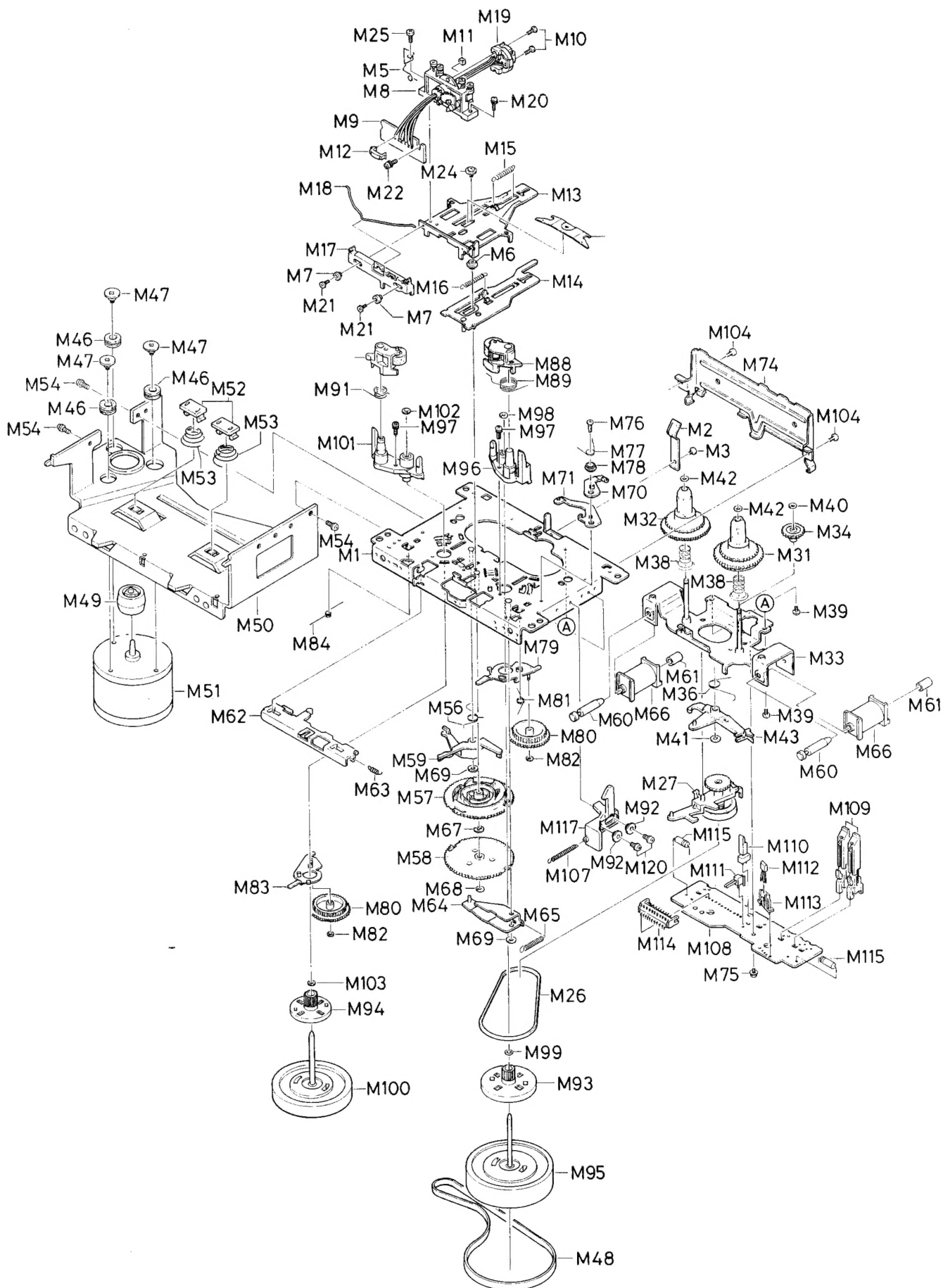
## PARTS LIST (MECHANISM TMW8500PTN)

### MECHANISM A

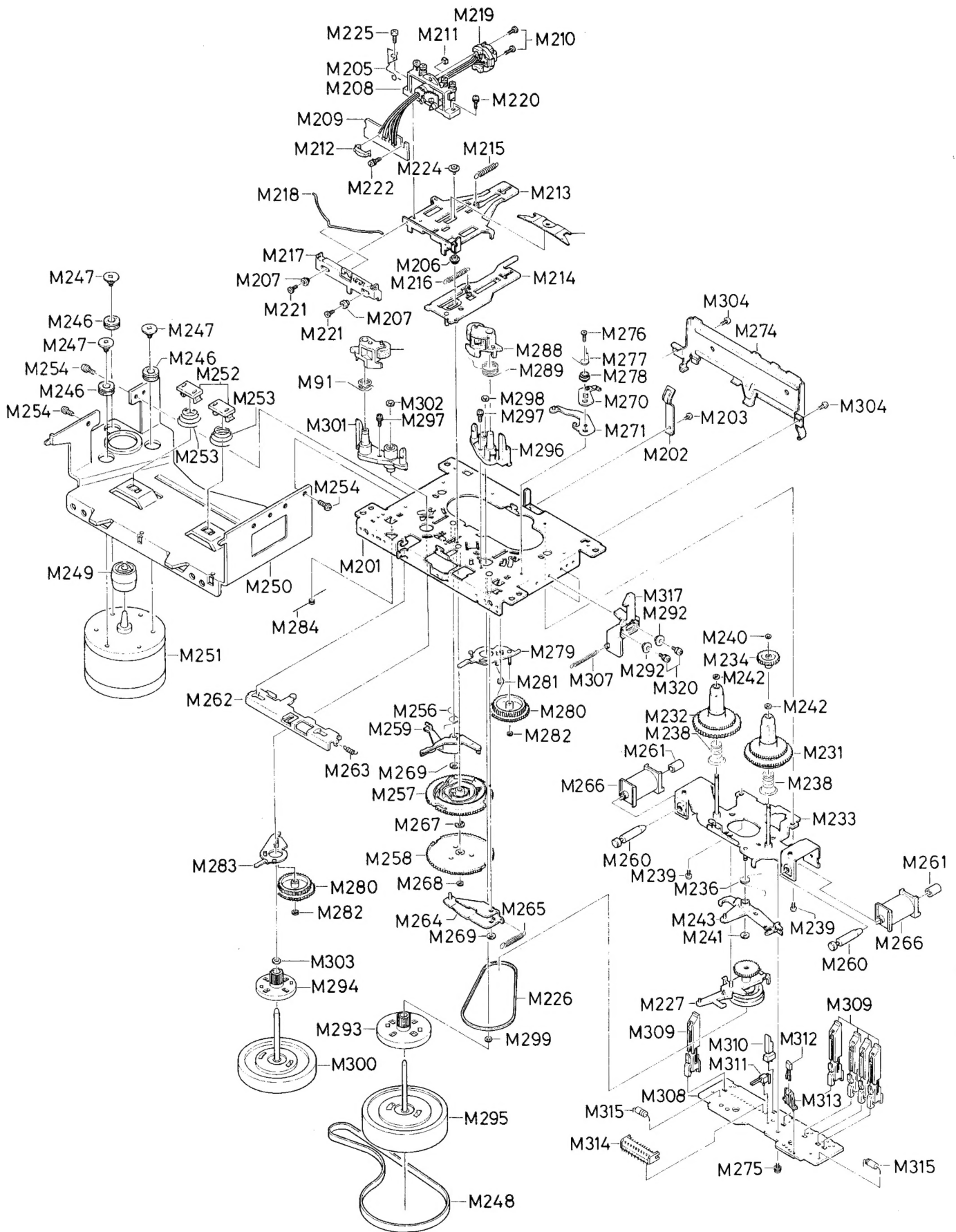
Ref. No.	Part No.	Description
M99	412 032 4701	HLWASHER, 2.8X3.8X0.3
M10	412 032 2608	SPECIAL SCREW, HEAD COLLAR
M97	412 032 3605	SPECIAL SCREW, S TAPP M2X6
M101	614 206 2715	ASSY, BRACKET-E, FL METAL (R)
M6	614 212 5991	COLLAR, PANEL
M18	614 214 0970	SPRING, WIRE, PINCH
M1	614 206 2708	ASSY, CHASSIS
M2	614 206 3200	PLATE, PACK SPRING
M3	412 027 2606	SPECIAL SCREW, C TAPP M2X3
M5	614 206 5105	SPRING, WIRE, CLUMP SP (V)
M7	614 206 3118	COLLAR, CHP LEVER
M8	614 207 2141	ASSY, BRACKET-E, HEAD BASE
M9	614 206 3408	PCB
M11	614 206 2937	SPACER, SPACER
M12	614 206 2975	FIXER, WIRE CLAMP
M13	614 206 3248	SLIDE, HEAD PANEL (A)
M14	614 206 2821	ASSY, SLIDE, HEAD PANEL (B)
M15	614 206 3286	SPRING, TENS, RC
M16	614 206 3293	SPRING, TENS, PANEL SPRING
M17	614 206 3194	LEVER, CHP
M19	614 206 3385	HEAD, PLAY
M20	412 032 2707	SPECIAL SCREW, TAMS M2X5
M21	412 032 2806	SPECIAL SCREW, CAMERA M17X3
M22	412 032 2905	SPECIAL SCREW, S TAPP TAMS M2X5
M24	412 032 3001	SPECIAL SCREW, CUPS TAPP M2X5
M25	412 032 4800	SPECIAL SCREW, BIND M2X5
M26	614 206 4849	BELT, FLAT, RF
M27	614 206 4436	ASSY, PULLEY, CLUTCH
M31	614 206 4399	ASSY, REEL, T (F)
M32	614 207 2158	ASSY, REEL, T (R)
M33	614 206 4382	ASSY, BRACKET-M
M34	614 206 4658	GEAR, FF
M36	614 206 5099	SPRING, WIRE, FR TRIGGER ARM
M38	614 206 3309	SPRING, COMP, B.T (R)
M40	412 013 4904	SPECIAL WASHER, P CUT 1.2X3X0.25
M41	412 013 7608	SPECIAL WASHER, PW CUT 2.1X5
M42	412 032 3902	SPECIAL WASHER, HL CUT 1.4X3.2X0.4
M43	614 206 3149	LEVER, RF TRIGGER ARM
M46	614 206 2944	CUSHION, RUBBER, MOTOR
M47	412 032 4008	SPECIAL SCREW, MOTOR
M48	614 212 3515	BELT, FLAT, MAIN
M50	614 212 3454	BRACKET-M, MOTOR
M51	614 212 7254	COMMUTATE MOTOR ASSY
M52	614 212 3461	SUPPORT, FLYWHEEL
M53	614 212 3539	SPRING, COMP, DUMPER

Ref. No.	Part No.	Description
M56	614 206 3347	SPRING, WIRE, M TRIGGER ARM
M57	614 206 3002	GEAR, M
M58	614 206 3019	GEAR, RF CAM
M59	614 206 3170	LEVER, M TRIGGER ARM
M60	614 206 2906	SHAFT, PLUNGER
M61	614 206 4627	HOLDER, PLUNGER
M62	614 206 2814	ASSY, SLIDE, CH
M63	614 206 3279	SPRING, TENS, CH SLIDE
M64	614 206 2807	ASSY, LEVER, P KICK
M66	614 206 3491	MAGNETIC COIL, SOLENOIDE
M67	412 032 3100	SPECIAL WASHER, E RING D 2.0
M68	412 032 3209	SPECIAL WASHER, HL CUT 1.55X3.5X0.5
M69	412 032 3308	SPECIAL WASHER, HL CUT 2.1X5X0.4
M70	614 206 3163	LEVER, E STOPPER A
M71	614 206 3156	LEVER, E STOPPER B
M74	614 206 3224	SLIDE, SW PROTECTOR
M75	412 032 2509	SPECIAL SCREW, S TAPP TAMS M2X5
M76	412 034 1005	SPECIAL SCREW, CAMERA S TAPP 2X6
M77	614 206 3316	SPRING, WIRE, E STOPPER
M78	614 206 3095	COLLAR, E STOPPER
M80	614 206 4207	GEAR, T
M81	614 206 3323	SPRING, WIRE, TG ARM (F)
M82	412 013 4904	SPECIAL WASHER, P CUT 1.2X3X0.25
M83	614 206 4467	ASSY, LEVER, T GEAR (R)
M84	614 206 3330	SPRING, WIRE, TG ARM (R)
M88	614 212 7469	ASSY, PINCHROLLER, (F)
M89	614 206 3354	SPRING, WIRE, P (F)
M90	614 212 7476	ASSY, PINCHROLLER, (R)
M91	614 206 3361	SPRING, WIRE, P ARM (R)
M92	614 206 3125	COLLAR
M95	614 212 5793	ASSY, FLYWHEEL, (F)
M96	614 206 2722	ASSY, BRACKET-E, FL METAL
M98	412 032 3506	SPECIAL WASHER, NYLON 2.1X3.5X0.5
M100	614 212 5809	ASSY, FLYWHEEL (R)
M102	412 027 9803	SPECIAL WASHER, NYLON 2.1X3.5X0.5
M103	412 034 0800	SPECIAL WASHER, HLW 2.1X3.5X0.3
M104	412 026 2003	SPECIAL SCREW, C TAPP M2X4
or	412 004 0908	SPECIAL SCREW, C TAPP M2X4
M107	614 206 3262	SPRING, TENS, E SLIDE LEVER SPRING
M108	614 214 0987	PCB, MECH
M109	614 206 3538	SWITCH, LEAF, MTS-10250MVJO
M110	614 206 5112	SWITCH, LEAF, MSW-1699CZ
M111	614 206 5129	SWITCH, LEAF, MSW-17940MVDO
M112	409 128 5209	IC LB9051A
M113	614 206 2968	HOLDER, IC PROTECTOR
M114	614 017 3888	PLUG, 9P
M115	407 004 9105	DIODE DSF10C
M117	614 206 3217	SLIDE, E SLIDE LEVER
M118	614 214 0963	SPRING, PLATE
M97	614 032 3605	SCREW, SPECIAL, M2X6

# EXPLODED VIEW (MECHANISM TAPE-A)



# EXPLODED VIEW (MECHANISM TAPE-B)





PARTS LIST (MECHANISM TMW8500RTN)

MECHANISM B

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
M299	412 032 4701	HL WASHER, 2.3X3.8X0.3	M265	614 212 4543	SPRING, WIRE, PK LEVER
M297	412 032 3605	SPECIAL SCREW, S TAPP M2X6	M266	614 206 3491	MAGNETIC COIL, SOLENOIDE
M301	614 206 2715	ASSY, BRACKET-E, (R)	M267	412 032 3100	SPECIAL WASHER, E RING D 2.0
M206	614 212 5991	COLLAR, PANEL	M268	412 032 3209	SPECIAL WASHER, HL WASHER CUT 1.55X3.5X0.5
M201	614 206 2708	ASSY, CHASSIS	M269	412 032 3308	SPECIAL WASHER, HL CUT 2.1X5X0.4
M202	614 206 3200	PLATE, PACK SPRING	M270	614 206 3163	LEVER, E STOPPER A
M203	412 027 2606	SPECIAL SCREW, C TAPP M2X3	M271	614 206 3156	LEVER, E STOPPER B
M205	614 206 5105	SPRING, WIRE, CLUMP SP (V)	M274	614 206 3224	SLIDE, PROTECTOR
M207	614 206 3118	COLLAR, CHP LEVER COLLAR	M275	412 032 2509	SPECIAL SCREW, S TAPP TAMS M2X5
M208	614 207 2141	ASSY, BRACKET-E, HEAD BASE	M276	412 034 1005	SPECIAL SCREW, CAMERA
M209	614 206 1954	PCB, RELAY BOARD	M277	614 206 3316	SPRING, WIRE, E STOPPER
M210	412 032 2608	SPECIAL SCREW, HEAD COLLAR	M278	614 206 3095	COLLAR, E STOPPER
M211	614 206 2937	SPACER	M280	614 206 4207	GEAR, T
M212	614 206 2975	FIXER, WIRE CLAMP	M281	614 206 3323	SPRING, WIRE, TG ARM (F) SPRING
M213	614 206 3248	SLIDE, HEAD PANEL (A)	M282	412 013 4904	SPECIAL WASHER, P CUT 1.2X3X0.25
M214	614 206 2821	ASSY, SLIDE, HEAD PANEL (B)	M283	614 206 4467	ASSY, LEVER, T GEAR (R)
M215	614 206 3286	SPRING, TENS, RC	M284	614 206 3330	SPRING, WIRE, TG ARM (R)
M216	614 206 3293	SPRING, TENS, PANEL	M288	614 212 7469	ASSY, PINCHROLLER, (F)
M217	614 206 3194	LEVER, CHP	M289	614 206 3354	SPRING, WIRE, P ARM (F)
M218	614 214 0970	SPRING, WIRE, PINCH POLLER	M290	614 212 7476	ASSY, PINCHROLLER, (R)
M219	614 206 1947	HEAD, R/P	M291	614 206 3361	SPRING, WIRE, P ARM (R) SPRING
M220	412 032 2707	SPECIAL SCREW, M2X5	M292	614 206 3125	COLLAR
M221	412 032 2806	SPECIAL SCREW, CAMERA M1.7X3	M295	614 212 5793	ASSY, FLYWHEEL, (F)
M222	412 032 2905	SPECIAL SCREW, S TAPP TAMS M2X5	M296	614 206 2722	ASSY, BRACKET-E, FL METAL
M224	412 032 3001	SPECIAL SCREW, CUPS TAPP M2X5	M298	412 032 3506	SPECIAL WASHER, NYLON 2.1X3.5X0.5
M225	412 032 4800	SPECIAL SCREW, BIND M2X5	M300	614 212 5809	ASSY, FLYWHEEL, (R)
M226	614 206 4849	BELT, FLAT	M302	412 027 9803	SPECIAL WASHER, NYLON 2.1X3.5X0.5
M227	614 206 4436	ASSY, PULLEY, RF	M303	412 034 0800	SPECIAL WASHER, HL 2.1X3.5X0.3
M231	614 206 4399	ASSY, REEL, T (F)	M307	614 206 3262	SPRING, TENS, E SLIDE LEVER
M232	614 207 2158	ASSY, REEL, T (R)	M308	614 214 0987	ASSY, PCB, MECH
M233	614 206 4382	ASSY, BRACKET-M, REEL BASE	M309	614 206 3538	SWITCH, LEAF, MSW-10250MV.TO
M234	614 206 4658	GEAR, FF	M310	614 206 5112	SWITCH, LEAF, MSW-1699CZ
M236	614 206 5099	SPRING, WIRE, FR TRIGGER	M311	614 206 5129	SWITCH, LEAF, MSW-17940MVDO
M238	614 206 3309	SPRING, COMP, B.T SPRING (R)	M312	409 128 5209	IC LB9051A
M239	412 026 2003	SPECIAL SCREW, C TAPPING M2X4	M313	614 206 2968	HOLDER
M240	412 013 4904	SPECIAL WASHER, PWASHER CUT 1.2X3X0.25	M314	614 017 3918	PLUG
M241	412 013 7608	SPECIAL WASHER, PW CUT 2.1X5X0.5	M315	407 004 9105	DIODE DSF10C
M242	412 032 3902	SPECIAL WASHER, HL	M317	614 206 3217	SLIDE, E SLIDE LEVER
M243	614 206 3149	LEVER, RF TRIGGER	M320	412 032 2509	SPECIAL SCREW, S TAPP
M246	614 206 2944	CUSHION, RUBBER, MOTOR	M321	614 214 0963	TAMS M2X5
M247	412 032 4008	SPECIAL SCREW, MOTOR COLLAR			SPRING, PLATE
M248	614 212 3515	BELT, FLAT, MAIN			
M249	614 212 3454	BRACKET-M, MOTOR			
M251	614 212 7254	COMMUTATE MOTOR ASSY			
M252	614 212 3461	SUPPORT, FLYWHEEL, FL			
M253	614 212 3539	SPRING, COMP, DUMPER			
M256	614 206 3347	SPRING, WIRE, M TRIGGER			
M257	614 206 3002	GEAR, M			
M258	614 206 5044	SPRING, TENS, PK LEVER			
M259	614 206 3170	LEVER, M TRIGGER ARM			
M260	614 206 2906	SHAFT, PLUNGER			
M261	614 206 4627	HOLDER, PLUNGER			
M262	614 206 2814	ASSY, SLIDE, CH SLIDE LEVER			
M263	614 206 3279	SPRING, TENS, CH SLIDE LEVER			
M264	614 206 2807	ASSY, LEVER, P KICK LEVER			

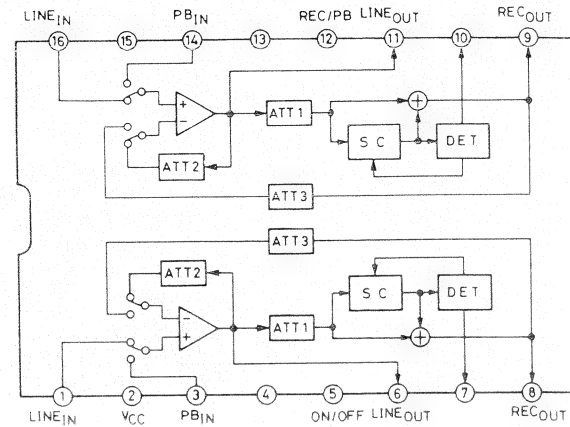
IC BLCOK DIAGRAM

IC603 LC66508B (SYSTEM CONTROL)

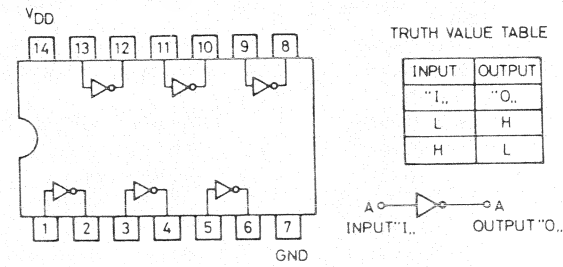
Pin No	Pin Name	I/O	Description	Pin No	Pin Name	I/O	Description
1	PDOWN	I	Power down Low-ON	51	KEY5	I	B Mech, Reverse play
2	DATA	---	Connect to +5V by Resistor, 10Kohm	52	KEY6	I	B Mech, stop
3	CLK	Gnd		53	KEY7	I	B Mech, Fast Forward
4	POWER	---	Connect to +5V by Resistor, 10Kohm	54	DIR	I	Direction sw
5	PMUTE	O	Play Mute control	55	TIMER	I	Timer Standby SW
6	RMUTE	O	Rec Mute control	56	KEY9	I	Normal speed dubbing
7	PLAYA/B	O	A Mech, B Mech play signal control	57	KEYOUT	O	Switching to Segment diodes and KEYIN
8	RESET	---	Connect to +5V by Resistor, 10Kohm	58	AMSSIN	I	Reset SW of Counter Low-ON
9	A-FF LED	O	A Mech, Fast Forward LED	59	IRIN	I	Remocon data signal
10	A-RRLED	O	Gnd	60	DUBIN	I	Input terminal of Dubbing control
11	B-FFLED	O	Gnd	61	CSTOP	I	Input terminal of Call stop
12	B-RRLED	O	Gnd	62	DUBOUT	O	Dubbing control
13	A-RLED	O	Gnd	63	AF	O	Auto Function control
14	B-RLED	O	Gnd	64	VDD	---	Power source
15	A-ANTREC	I	A-ANTREC SW for B Mech, Forward				
16	B-ANTREC	I	B-ANTREC SW for B Mech, Reverse				
17	B-REEL	I	B Mech, Reel Pulse				
18	B-PACK	I	Detecting terminal for Cassette Tape, B Mech				
19	B-FF/REWSW	I	Detecting terminal for FF.REW mode in B Mech				
20	B-PLAYSW	I	Detecting terminal for Play mode in B Mech				
21	B-P2	O	B Mech, FF.REW Plunger Control				
22	B-P1	O	B Mech, Play Plunger Control				
23	B-MOTOR	O	B Mech, Motor Switching				
24	B-HIGH	O	B Mech, Motor Speed switching				
25	A/BLED	---	Open				
26	DUBLED	O	Normal Speed Dubbing LED				
27	HDUB	O	High Speed Dubbing LED				
28	IRIND	---	Open				
29	A-REEL	I	A Mech, Reel Pulse				
30	TEST	---	Gnd				
31	VSS	Gnd					
32	OSC1	I	Pin for connection to 4.19 MHZ crystal OSC.				
33	OSC2	O					
34	RESET	I	Input Terminal of system reset				
35	A-PACKSW	I	Detecting terminal for Cassette Tape, A Mech				
36	A-FF/REWSW	I	Detecting terminal for FF.REW mode in A Mech				
37	A-PLAYSW	I	Detecting terminal for Play mode in A Mech				
38	A-P2	O	A Mech, FF.REW Plunger				
39	A-P1	O	A Mech, Play Plunger				
40	A-MOTOR	O	A Mech, Motor ON/OFF				
41	A-HIGH	O	A Mech, Motor speed control				
42	A-LED	O	A Mech, Forward LED drive				
43	B-LED	O	B Mech, Forward LED drive				
44	RECLE	O	B Record LED drive				
45	MUTELED	O	Mute LED drive				
46	KEY1	I	A Mech, Forward play				
47	KEY2	I	A Mech, Reverse play				
48	KEY3	I	A Mech, stop (KEY1, 2) A Mech, Reverse (KEY2, 3)				
49	KEY8	I	B Mech, Forward (KEY5, 6)				
50	KEY4	I	B Mech, Forward play				

# IC BLOCK DIAGRAM

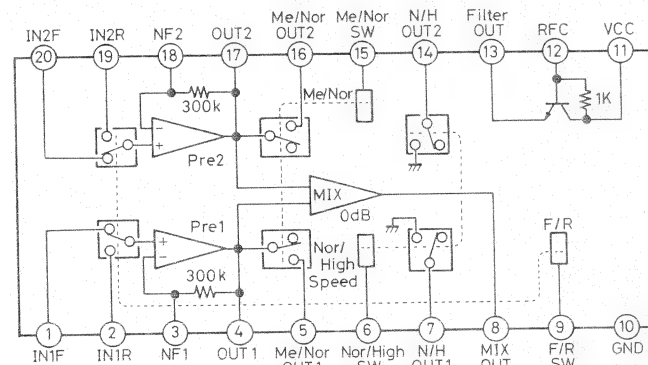
IC501 CXA1101P  
(DOLBY B-Type Noise Reduction)



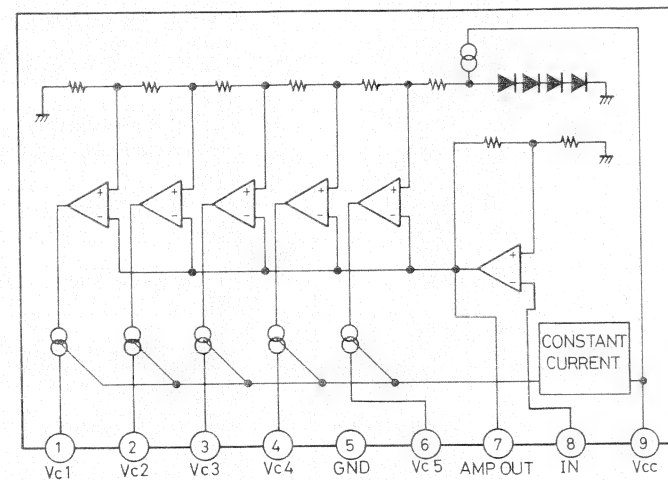
IC602 LC4069 (Hex Inverter)



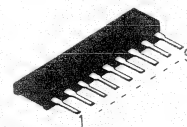
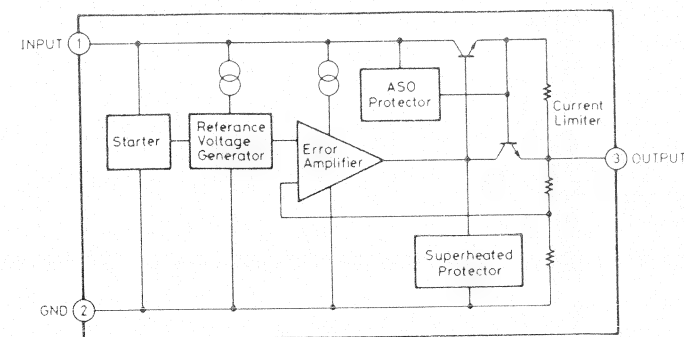
IC701 LA3246 (Pre-Amp Mixing-Amp Electrical Switch)



IC604 BA6124 (Level Meter Driver)

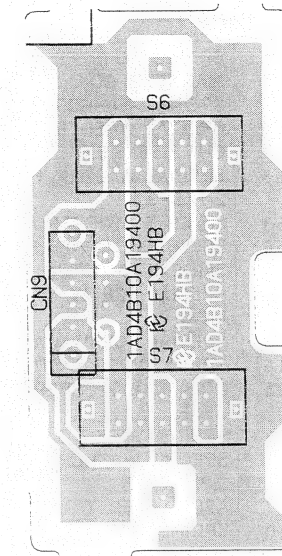


IC901, IC902 AN7812 (12V 3-Terminal Constant Voltage Regulated Power Supply)

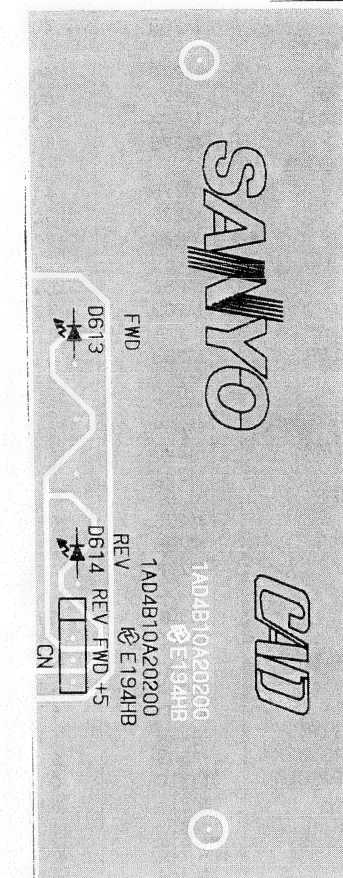


# PCB VIEW (1)

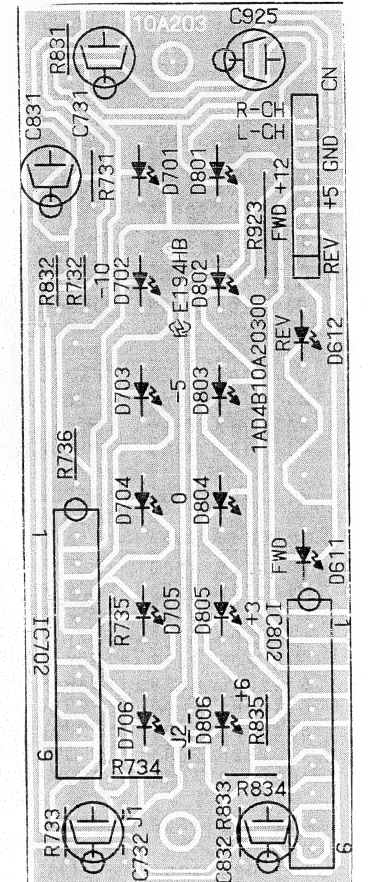
MODE TIMER PCB



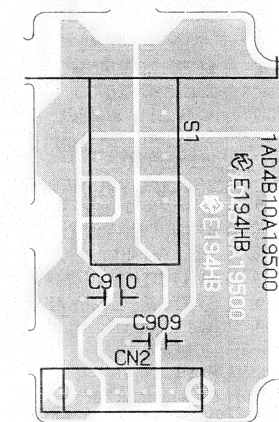
TAPE-A LED PCB



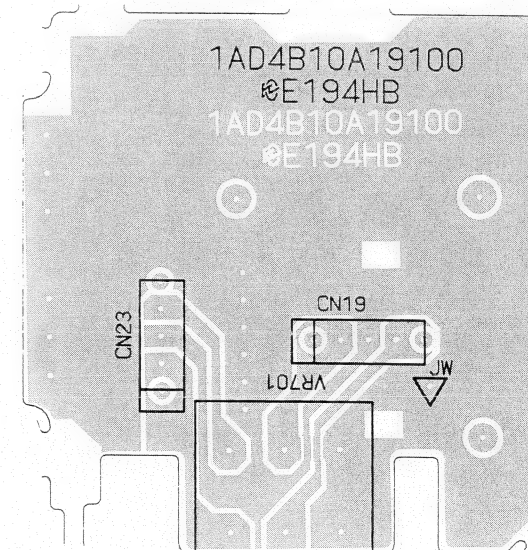
TAPE-B LED PCB



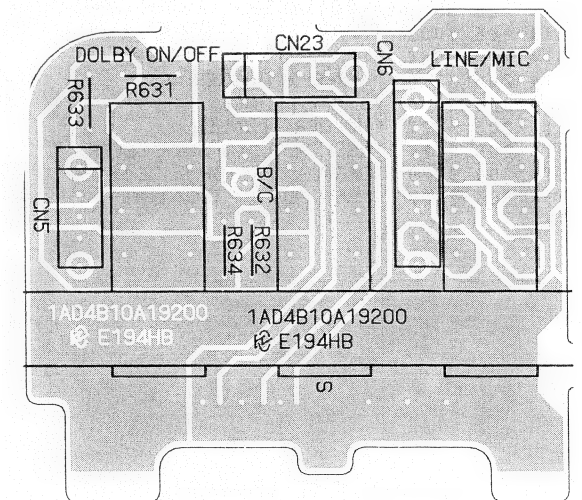
POWER SW PCB



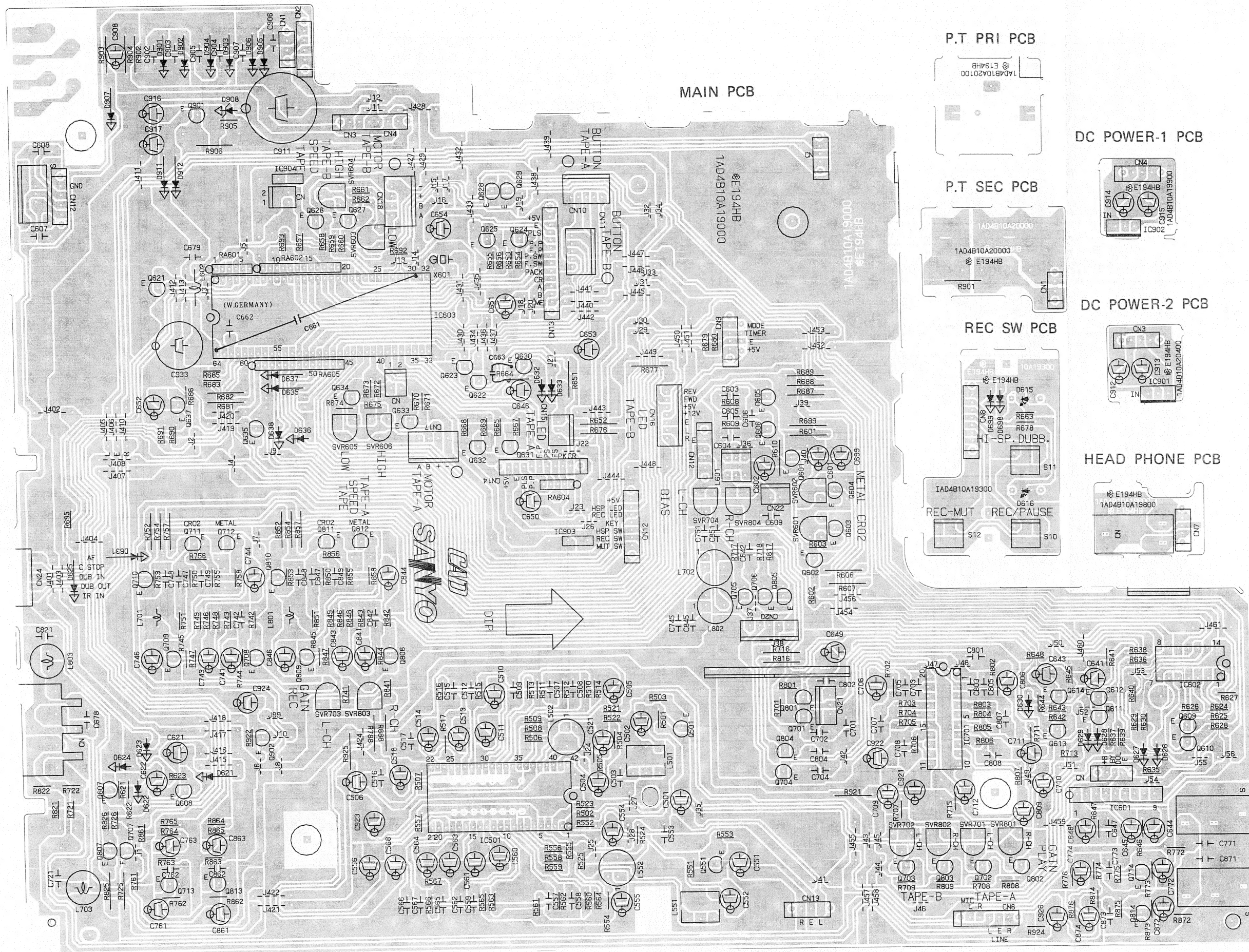
VR PCB



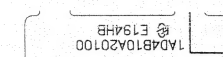
DOL INPUT SW PCB



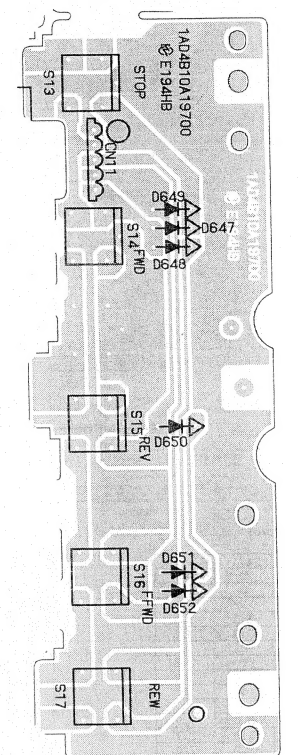




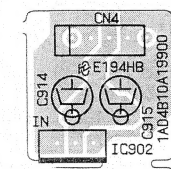
P.T PRI PCB



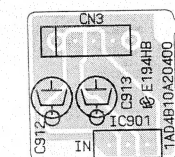
TAPE-B MECH PCB



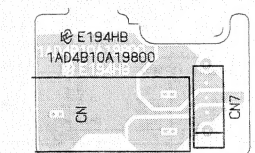
DC POWER-1 PCB



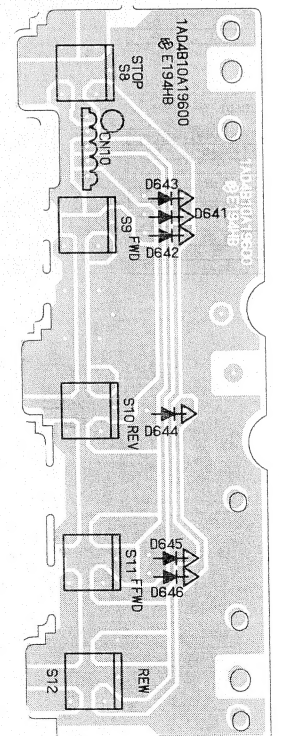
DC POWER-2 PCB



HEAD PHONE PCB

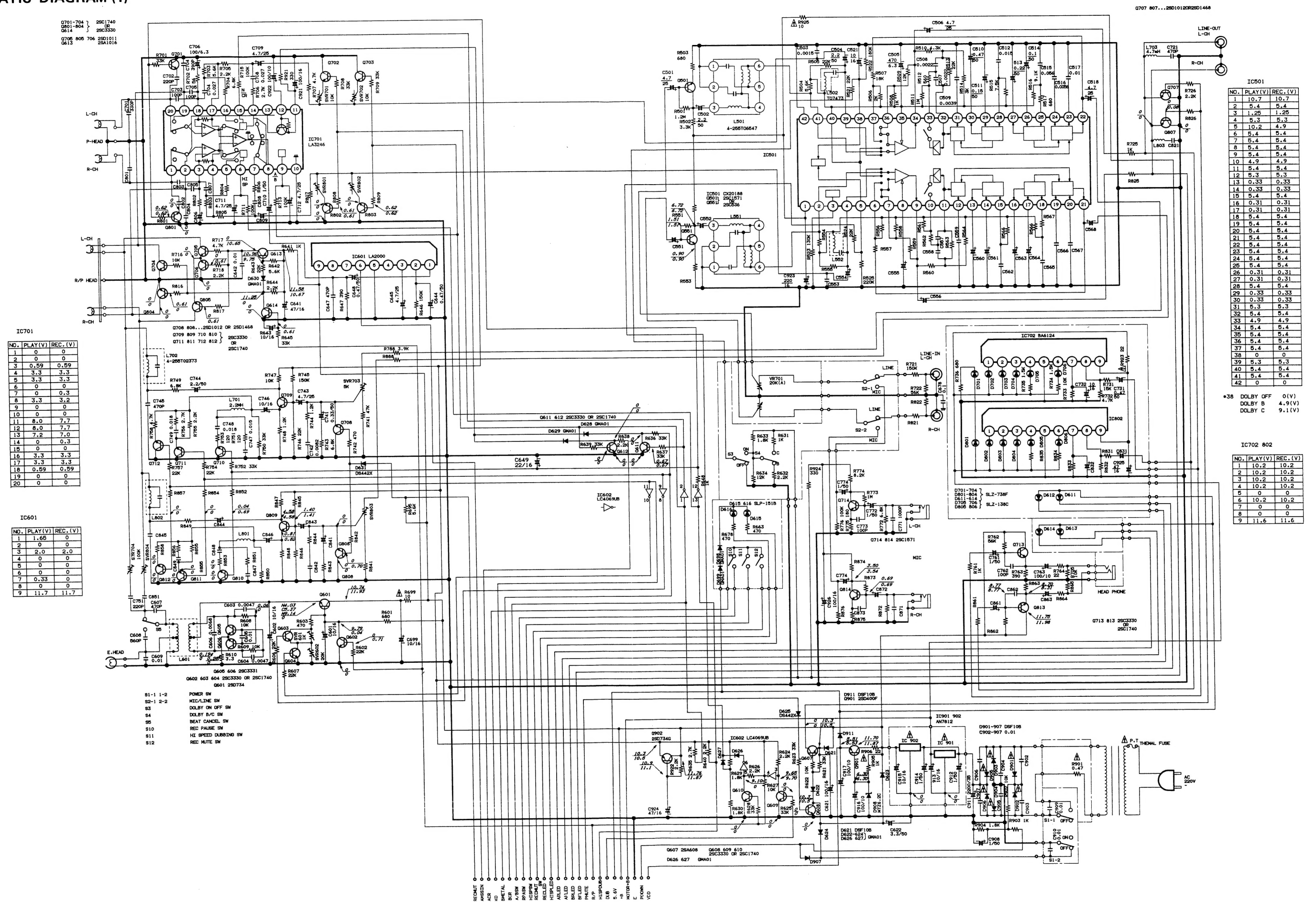


TAPE-A MECH PCB





### SCHEMATIC DIAGRAM (1)

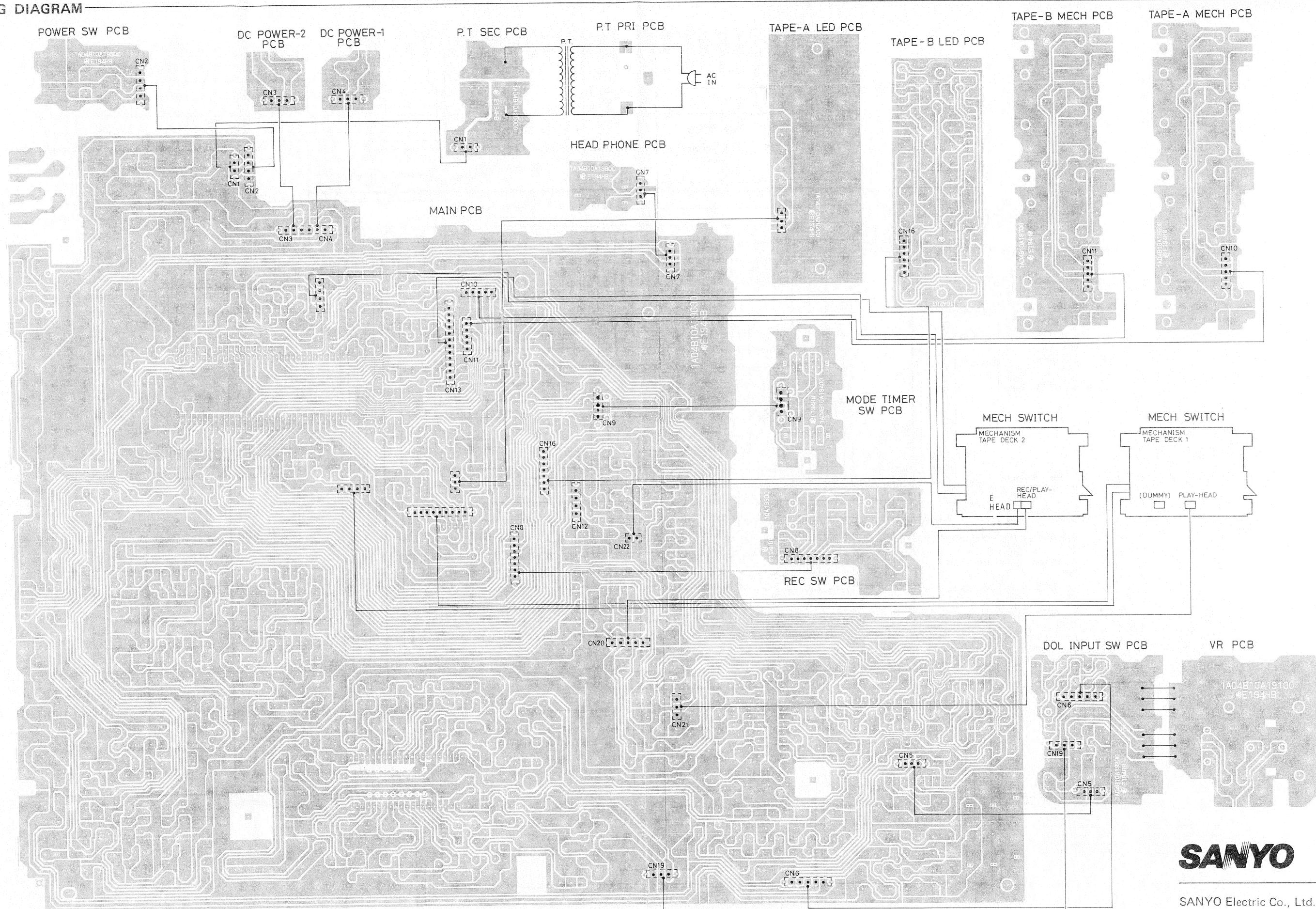


### SCHEMATIC DIAGRAM (2)





WIRING DIAGRAM



**SANYO**

SANYO Electric Co., Ltd.  
Osaka, Japan